IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Khalid Youseff
Title of Invention	:	RAPID TRAINING ECHO CANCELLOR FOR TELECOMMUNICATIONS SYSTEM
Filed	:	March 25, 1999
Serial No.	:	09/276,021
Examiner	:	Jefferey F. Harold
Group Art Unit	:	2644
Attorney Docket No.	:	024/6

Box Non-Fee Amendment
Commissioner for Patents
Washington, DC 20231

RESPONSE

Sir:

This is responsive to the June 5, 2002 Office Action in connection with the above-referenced patent application.

Claims 1-3, 5 and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Boyer. Claims 4 and 6 are objected to as being dependent upon a rejected base claim, but the Examiner notes that claims 4 and 6 contain allowable subject matter.

Applicant respectfully traverses the rejection based upon Boyer.

The present invention is directed to an apparatus which sets up plural echo cancellors that are each operative to cancel echos during predetermined non-overlapping time bandwidths. For example, the first echo cancellor may operate to cancel echos arriving between zero and ten milliseconds, a second echo cancellor may cancel all echos arriving after ten milliseconds but prior to twenty milliseconds. After a predetermined training period, the echo cancellors that are not

producing a significant output are eliminated from operation.

The foregoing technique allows the system to quickly estimate the delay of most echos requiring cancellation. More specifically, all time delays are initially operative, but as soon as it is determined that echos are not being produced during certain time bandwidths, the corresponding echo cancellors are simply eliminated entirely.

Applicant's claim 1 defines the system recited above by specifically requiring that after a predetermined training period, all echo cancellors that produce a cancellation signal below a predetermined threshold are eliminated. Thus, echo cancellors that are operative to cancel echos during a predetermined time bandwidth wherein there is relatively low echo will produce a relatively low signal and will simply be eliminated.

Boyer does not disclose or even remotely suggest the elimination of certain echo cancellors after a predetermined time period. Instead, as clearly explained at column 4, lines 12-20, Boyer discloses the use of several echo cancellors in tandum which adapt at different times. The process of adapting one or more of the echo cancellors stops at a certain time, but the echo cancellor continues to operate. Boyer's technology is based upon the assumption that if one echo cancellor converges relatively quickly, it can stop adapting while continuing to operate and allow the other echo cancellor to adapt. Nonetheless, in the Boyer arrangement, both echo cancellors continue to operate regardless of whether they are adapting or not.

It is therefore submitted that the Boyer arrangement does not include a technique that implements plural echo cancellors that operate to cancel echos arriving during different time bandwidths, and then eliminates one or more of those echo cancellors after a predetermined training period. Instead, Boyer implements plural echo cancellors, all of which remain operative, and simply
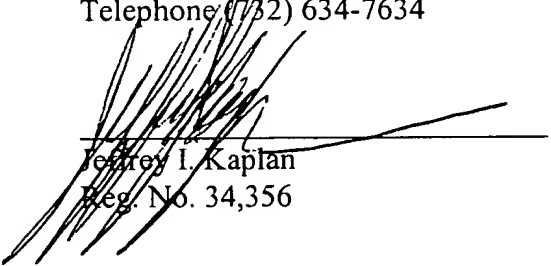
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changes the times at which different echo cancellors are adapting. Therefore, Boyer neither

discloses nor even remotely suggests applicant's unique claimed invention.

In view of the foregoing remarks, applicant respectfully requests reconsideration and

allowance.

Respectfully submitted,

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DATED: June 25, 2002

Jeffrey I. Kaplan
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal service as first class mail, in a postage prepaid envelope, addressed to Box Non-Fee Amendment, Commissioner for Patents, Washington, D.C. 20231 on June 25 2002.

Dated _____ June 25, 2002 _____

Signed _____ Paula M. Halsey _____

Print Name _____ Paula M. Halsey _____